surface science

Contents

Volume 268 (1992) Nos. 1–3

Surface Science Letters

Enhanced room temperature oxidation of GaAs(100) using NO_2
A. vom Felde, G. Meigs, C.C. Bahr and M.J. Cardillo L249

Observation and LEED $I-V$ analysis of the Ge(111)-1×1-Sb system
K.J. Wan, W.K. Ford and J.C. Hermanson L253

Edge separation distribution in vicinal silicon (001)
R. Kariotis L258

Phase transition on the Si(111) surface: a first order phase transition under strain?
J. Chevrier, Le Thanh Vinh and A. Cruz L261

Decomposition of NH_3 on Si(100): a SSIMS study
X.-L. Zhou, C.R. Flores and J.M. White L267

A LEED crystallographic analysis for the $c(2\times2)$ surface structure formed by the chemisorption of PH_3 on the Rh(100) surface
J.R. Lou and K.A.R. Mitchell L274

Unoccupied orbitals of C and O on Fe(100)
F.J. Himpsel and J.E. Ortega L279

On the bilayer growth mode of Au on Ag(110)
K.-P. Bohnen, C.T. Chan and K.M. Ho L284

Hydrogen adsorption on Al(110): strong orientation-dependence of aluminum hydride desorption
H. Kondoh, M. Hara, K. Domen and H. Nozoye L287

Alumina-induced reconstruction on annealed (001) surfaces of rutile
J. Liu, L. Wang and J.M. Cowley L293

Phase segregation and work-function variations on metal surfaces: spontaneous formation of periodic domain structures
D. Vanderbilt L300

Vibrational effects in the associative desorption of H_2
G.R. Darling and S. Holloway L305

Crossover effects in models of kinetic growth with surface diffusion
S. Das Sarma, Z.-W. Lai and P.I. Tamborenea L311

Attenuation of electrons in non-crystalline solids
W.S.M. Werner and I.S. Tilinin L319

An isolating algorithm for automated surface structure determination using RHEED
L.-M. Peng and M.J. Whelan L325

Erratum to: "Multilayer lattice gas model with a restriction on the atomic stacking". Surface Science Letters 258 (1991) L697
H. Asada and H. Sekito L330

Contents continued on inside cover

Surface Science

A near-edge X-ray absorption fine structure and photoelectron spectroscopic study of the structure of acetylene on Pd(111) at low temperature
H. Hoffmann, F. Zaera, R.M. Ormerod, R.M. Lambert, J.M. Yao, D.K. Saldin, L.P. Wang, D.W. Bennett and W.T. Tysoe 1

The interactions of oxygen with aldehydes on the Pd(111) surface
J.L. Davis and M.A. Barteau 11

NO chemisorption on supported Pd
G.W. Graham 25

Structural study of 1,2-dichloroethane on Cu(111) using X-ray absorption and standing waves
M. Kerkar, W.K. Walter, D.P. Woodruff, R.G. Jones, M.J. Ashwin and C. Morgon 36

A LEIS study of the surface structure of a molybdenum on γ-alumina catalyst
G.C. van Leerdam, J.-P. Jacobs and H.H. Brongersma 45

Structure and epitaxy of anodic $TiO_2/Ti(11\bar{2}0)$
D.G. Wiesler, M.F. Toney, M.G. Samant, O.R. Melroy, C.S. McMillan and W.H. Smyrl 57

Structure and diffusion of clusters on Ni surfaces
C.-L. Liu and J.B. Adams 73

Initial stages of oxidation of the Ni_3Al alloy: structure and composition of the aluminum oxide overlayer studied by XPS, LEIS and LEED
U. Bardi, A. Atrei and G. Rovida 87

Lateral interactions and structural phase transitions in ultrathin Hg films
X.J. Kime, J. Zhang and P.A. Dowben 98

Competition between static and dynamical effects in adsorption: sticking of Ar on Ar-covered Ru(001)
M. Head-Gordon, J.C. Tully 113

The adsorption of acetylene on rhodium-modified colloidal silver, a surface-enhanced Raman study
H. Feilchenfeld, M. Luckier, L. Efron and B. Willner 127

s–d hybridization enhancement of noble metal particles
E. Anno 135

Effect of strain on thin film growth: deposition of Ni on Ag(100)
B.C. Bolding and E.A. Carter 142

Ion neutralization near a contaminated metal surface
J.J. Xie and T. Zhang 155

The nonlinear kinetics of gas–surface exchange between CO/CO* on Re(0001)
X. Guo, A.E. Platt, N. Xiang, L. Zhang, Z. Son, R. Zhai and D. Wang 161

Growth, structure and chemical properties of FeO overlayers on Pt(100) and Pt(111)
G.H. Vurens, V. Maurice, M. Salmeron and G.A. Somorjai 170

Photoemission and thermal desorption studies of electron beam polymerized thiophene films on Pt(111)
T.A. Land and J.C. Hemminger 179

One-dimensional CO island formation in the coadsorption of H_2 and CO on the steps of Pt(112)
M.A. Henderson and J.T. Yates, Jr. 189

Adsorption and thermal behavior of ethylene on Si(100)-(2 × 1)
L. Clemen, R.M. Wallace, P.A. Taylor, M.J. Dresser, W.J. Choyke, W.H. Weinberg and J.T. Yates, Jr. 205

Reaction pathways and intermediates in the decomposition of dimethylzinc on GaAs(100)
M.A. Rueter and J.M. Vohs 217

LEEM investigations of the domain growth of the (7 × 7) reconstruction on Si(111)
R.J. Phaneuf, N.C. Bartelt, E.D. Williams, W. Święch and E. Bauer 227

The reaction of atomic oxygen with Si(100) and Si(111). II. Adsorption, passive oxidation and the effect of coincident ion bombardment
J.R. Engstrom, D.J. Bonser and T. Engel 238

Calculated electronic structure at the CaF_2/Si(111) interface
H. Fujitani and S. Asano 265

Surface self-diffusion of Si on Si(001)
Y.-W. Mo, J. Kleiner, M.B. Webb and M.G. Lagally 275

Epitaxial growth of coronene and hexa-peri-benzocoronene on MoS_2(0001) and graphite (0001): a LEED study of molecular size effects
U. Zimmermann and N. Karl 296

Light-induced interaction of CCl_4 with GaAs(110)
V. Liberman, G. Haase and R.M. Osgood, Jr. 307

Surface morphology of epitaxial CaF_2 and SrF_2 layers grown onto InP(001) studied by atomic force microscopy and low-energy electron diffraction
W. Weiss, K. Kasper, K.H. Herrmann, D. Schmeisser and W. Göpel 319

Reactions of NO, O_2, H_2O and CO_2 with the basal plane of graphite
X. Chu and L.D. Schmidt 325

Imaging steep, high structures by scanning force microscopy with electron beam deposited tips
D.J. Keller and Chou Chih-Chung 333

Ion-beam mixing with chemical guidance. I. The bilayer problem
A. Miotello and R. Kelly 340

Pre- and initial stages of epitaxy in alkali halide systems. I. Interaction of molecular beams of KCl with (100) surfaces of NaCl
H. Dabringhaus and M. Haag 351

Pre- and initial stages of epitaxy in alkali halide systems. II. Interaction of molecular beams of CsCl with (100) surfaces of NaCl
H. Dabringhaus and M. Haag 365

A Monte Carlo simulation of the overlayer structure of PF_3 on Pt(111)
Y. Zhou, G. Jennings, J.C. Campuzano, V.K. Agrawal and M. Trenary 378

Structural analysis of lead phthalocyanine ultrathin films grown on cleaved faces of alkali halides by reflection high energy electron diffraction
H. Tada, K. Saiki and A. Koma 387

Oxygen-assisted cleavage of O–H, N–H, and C–H bonds on transition metal surfaces: bond-order-conservation–Morse-potential analysis
E. Shustorovich and A.T. Bell 397

Phonons on fcc (100), (110), and (111) surfaces using Lennard-Jones potentials. I. Comparision between molecular dynamics simulations and slab technique calculations
D.D. Koleske and S.J. Sibener 406

Phonons on fcc (100), (110), and (111) surfaces using Lennard-Jones potentials. II. Temperature dependence of surface phonons studied with molecular dynamics
D.D. Koleske and S.J. Sibener 418

The interaction of rare gas atoms with metal surfaces: a scattering theory approach
A. Chizmeshya and E. Zaremba 432

Theory of magnetoplasmons in semiconductor superlattices in the Faraday geometry: a Green-function approach
M.S. Kushwaha and B. Djafari-Rouhani 457

Author index 479

Subject index 484

Requirements for swift publication 496